

ATTACHMENT - REMARKS

Claims 1, 3, 4, 8, 10-15 and 17-20 are pending in the present application. By this Amendment, in conjunction with the contemporaneously filed Request for Continued Examination ("RCE"), Applicants have amended claims 11, 12 and 14, and added new claims 17-20. Applicants respectfully submit that the present application is in condition for allowance based on the discussion which follows.

In the outstanding Office Action of March 16, 2010, claims 11, 12 and 14 were rejected under 35 U.S.C. § 103(a) as allegedly being obvious from Howard (U.S. Patent No. 4,335,116) (hereinafter "Howard"). In the rejection, it was alleged that Howard teaches a trace element solution comprising complexes of ions of zinc, copper, manganese, chromium and selenium. Further, it was alleged that Howard discloses:

As one example, it is within the **comprehension** of the invention that solutions may be prepared to allow each milliliter thereof to contain: from about 0.1 to about 25 mg of zinc; from about 0.1 to about 10 mg of copper; from about 0.1 to about 20 mg of manganese; from about 0.01 to about 5.0 mg of chromium; and, from about 0.1 to about 12.0 mg of selenium.

(Howard, column 5, lines 28-35, emphasis added.)

It was then alleged that "the instant invention would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, given the teaching of Howard." (Office Action, page 3, last two lines.)

Contrary to the rejection, Applicants respectfully submit that Howard fails to teach or in any way make obvious the subject matter of previously presented claims 11, 12 and 14, as Howard fails to provide an enabling disclosure for one of ordinary skill in the art to produce a trace element solution having a concentration of 60 mg/ml or greater. Although it was alleged that, if one were to consider the ranges of the respective trace

elements as noted in Howard, column 5, lines 28-35, a solution could conceivably have a concentration of 60 mg/ml or greater, the disclosure in Howard fails to show how one of ordinary skill in the art could produce a trace element solution having such concentrations. Applicants first note that the statement in Howard is merely prophetic, stating "as one example, it is within the comprehension of the invention that solutions may be prepared...." However, merely wishing that one's disclosure encompasses subject matter does not, in fact, satisfy the requirements that a reference actually teaches one of ordinary skill in the art to actually produce or practice that contemplated invention.

Notwithstanding the foregoing, and in order to highlight one specific aspect of the present invention, by this Amendment, Applicants have amended claims 11, 12 and 14 to be directed to a method for preparing an injectable trace element solution using a continuous process. Subject matter basis for the now recited continuous process can be found in the specification as filed and in claim 1. Therefore, the amendments to claims 11, 12 and 14 do not constitute new matter.

Applicants respectfully submit that nowhere in Howard is there any disclosure with regard to using a continuous process, as cited in claims 11, 12 and 14. To the contrary, the only methods disclosed in Howard are found in the two examples in which a batch method is used to prepare the respective solutions. In the batch preparation of Howard, individual trace element solutions are prepared and then combined together to produce the Howard trace element solution. However, nowhere in Howard is there any teaching or instruction which would lead one of ordinary skill in the art to modify the batch method of Howard to use any other process, let alone a continuous process, to

produce a trace element solution, as claimed. Accordingly, Applicants respectfully submit that claims 11, 12 and 14 are not obvious in view of Howard.

Finally, by this Amendment, Applicants have added new claims 17, 19 and 20, directed to respective trace element solutions prepared by the methods of claims 11, 12 and 14, respectively. Applicants respectfully submit that the recited trace element solutions of claims 17, 19 and 20 are not obvious in view of Howard for at least the reasons discussed above with regard to previously presented claims 11, 12 and 14, namely Howard fails to provide a sufficient enabling disclosure to allow one of ordinary skill in the art to have produced an injectable solution comprising 60 mg/ml of trace elements, as claimed.

Further, Applicants have added new claim 18, dependent from claim 17, which further recites that an EDTA or disodium EDTA chelator is present, which further distinguishes the claimed solution from the one in Howard, which has tetrasodium EDTA. As discussed in the previously submitted Rule 132 Declaration, filed September 1, 2009 (hereinafter "the Smith Dec."), ¶ 9, the inclusion of the present EDTA allows for a higher concentration of trace elements, as compared with the tetrasodium EDTA of Howard.

Moreover, Applicants respectfully note that, in order for a prior art reference to be used in a prior art rejection under 35 U.S.C. § 103(a), the prior art must allow one of ordinary skill in the art to practice the claimed invention without undue experimentation. *Elan Pharma., Inc. v. Mayo Found.*, 64 U.S.P.Q.2d 1292 (Fed. Cir. 2002). Factors to be considered in determining whether undue experimentation is required are provided in *In re Wands*, 858 F.2d 731, 737; 8 U.S.P.Q. 1400, 1404 (Fed. Cir. 1988) and include the

state of the art, level of predictability in the art, existence of working examples, and the amount of direction by the author/inventor of the prior art (hereinafter collectively referred to as the "*Wands' factors*") (*Elan Pharma.*).

Applicants respectfully submit that all of the aforementioned *Wands' factors* weigh against finding that one of ordinary skill in the art would have been able to practice the claimed invention, i.e. produce a trace elements solution having a metal concentration comprising 60 mg/ml, without undue experimentation. Notwithstanding the "comprehension" intention of the patentee in Howard (column 5, lines 28-35), the state of the art at the time of Howard did not include knowledge of how to produce a trace metal solution having a metal concentration comprising 60 mg/ml (Smith Dec., ¶¶ 7-10). Moreover, the method disclosed in Howard would not have allowed one of ordinary skill in the art to produce a trace element solution having a metal concentration comprising 60 mg/ml, let alone 72 mg/ml (Smith Dec., ¶¶ 4-7 and 10). In fact, all examples in Howard are directed to a substantially smaller concentration than 60 mg/ml (Smith Dec., ¶¶ 4-7). For example, Howard "Example 1" discloses a 13.5 mg/ml trace element solution and "Example 2" discloses a 2.375 mg/ml trace element solution. See, e.g., Remarks to the Amendment filed September 1, 2009, page 3, for a further discussion on the specific examples and respective concentrations in Howard. Accordingly, the examples in Howard establish the *Wands' factor* of a lack of examples to enable one of ordinary skill in the art to practice the present invention with regard to a metal concentration comprising 60 mg/ml, i.e. a metal concentration between 4.4 and 25 times higher than the metal concentration enabled by Howard.

Furthermore, the method disclosed by Howard for producing its trace metal concentration is insufficient to allow one to produce a metal concentration of 72 mg/ml, let alone 60 mg/ml, as claimed (Smith Dec., ¶ 7). The reason the Howard method would be insufficient for producing the higher concentrations required include the fact that Howard discloses a method of producing individual trace metal solutions which are combined together to form a single trace element solution comprising all of its trace elements. Thus, Howard discloses a batch method for producing a combined trace metal solution. Further, Howard uses tetrasodium EDTA, which has a relatively lower complexing power than other forms of EDTA (Smith Dec., ¶ 9). Accordingly, the tetrasodium EDTA used and the batch method disclosed in Howard establish a lack of direction by the inventor to allow one of ordinary skill in the art to practice higher concentrations of a metal in the trace element solution, in accordance with the *Wands'* factors.

Moreover, the *Wands'* factor regarding the state of the art weighs against finding enablement in Howard to produce the claimed solution. At the time of Howard, the state of the art did not include knowledge of how to produce a trace element solution having the claimed concentrations. Howard fails to disclose any method which produces a trace metal solution having a trace metal concentration which in any way approaches the high metal concentration claimed. Moreover, Howard is completely silent with regard to providing any direction on how to produce a trace metal solution having the claimed concentrations. It is respectfully noted that, in contrast to Howard, the present specification fully enables one of ordinary skill in the art to produce the claimed trace metal solution, in that the present invention provides actual examples and discloses a

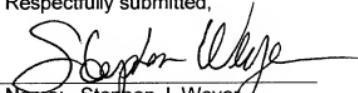
method completely different from Howard which allows one of ordinary skill in the art to produce the claimed solution having a metal concentration of 60 mg/ml.

In view of the foregoing, Applicants respectfully submit that Howard fails to be a reference which in any way makes obvious the claimed trace metal solution having a metal concentration comprising 60 mg/ml, as Howard fails to enable one of ordinary skill in the art to practice the invention as claimed. Therefore, in accordance with the holding in *Elan Pharma.*, Howard is not a reference which, under 35 U.S.C. § 103(a), makes the claimed solution obvious.

Based on the foregoing, although Howard might have contemplated a trace element solution having concentrations greater than 60 mg/ml, Howard fails to provide a sufficient disclosure which would allow one of ordinary skill in the art to actually produce a trace element solution having 60 mg/ml or greater. Since Howard does not provide an enabling disclosure to allow one to practice the invention as claimed, let alone produce a trace element solution comprising 60 mg/ml, the disclosure in Howard fails to make the trace element solution of claims 17-20 obvious, in view of *In re Wands* and *Elan Pharma.*

Applicants greatly appreciate the indication of allowability of claims 1, 3, 4, 8, 10, 13 and 15. In view of the foregoing, Applicants respectfully submit that all claims present allowable subject matter and that the present application is in condition for allowance. Should the Examiner come to a contrary conclusion, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,



Date: April 8, 2011

Signed By
Attorney of Record

Name: Stephen J. Weyer
Registration No.: 43,259

STITES & HARBISON PLC • 1199 North Fairfax St. • Suite 900 • Alexandria, VA 22314
TEL: 703-739-4900 • FAX: 703-739-9577 • CUSTOMER NO. 881